

**SUPERFUND RESPONSE ACTION PRIORITY PANEL REVIEW FORM****Date Form Completed:** 8/14/15**General Site Information**

Region:	4	City:	Vincent	State:	Alabama
CERCLIS EPA ID:	ALD004022448	CERCLIS Site Name:	Alabama Plating Company, Inc.		
NPL Status: (P/F/D)	F	Year Listed to NPL:	2012		

**Brief Site Description:** *(Site Type, Current and Future Land Use, General Site Contaminant and Media Info, Site Area and Location information.)*

The Site is located at 570 Highway 231 approximately one mile north of the town of Vincent, in Shelby County, Alabama, at the intersection of U.S. Highway 231 and Shelby County Road 60. It is comprised of 5.68 acres of vacant land. There are currently no buildings, structures, fencing or other physical remnants of the former APC operation remaining on the Site as they were removed as part of a time-critical removal action that took place from 1998-2001 where contaminated soils and former Site buildings were removed. The Site property is now primarily wooded and is an area of low-density residential development. The Site owner (non-PRP) is planning to construct a commercial retail operation there, and has actively engaged dry goods retailers such as the Family Dollar and Dollar General. We have issued a bona-fide prospective purchaser (BFPP) letter to the construction location firm that represents the Dollar General. The location is on well-traveled Highway 231 that connects I-20 to Birmingham through Pell City.

Former plating operations generated waste containing heavy metals. Contaminants of concern include aluminum, arsenic, cadmium, cobalt, cyanide, iron, manganese, mercury, thallium, and zinc in the groundwater which have over time not attenuated and require remediation.

**General Project Information**

Type of Action:	Remedial	Site Charging SSID:	A4G7
Operable Unit:	00	CERCLIS Action RAT Code:	
Is this the final action for the site that will result in a site construction completion?			X Yes <input type="checkbox"/> No
Will implementation of this action result in the Environmental Indicator for Human Exposure being brought under control?			X Yes <input type="checkbox"/> No

**Response Action Summary**

Describe briefly site activities conducted in the past or currently underway:

A previous Fund-lead time-critical removal action conducted between 1998 and 2001 removed and disposed of approximately 46,356 tons of non-hazardous soil, 11,125 tons of hazardous soil, 165 tons of zinc dross, 3,126 tons of cyanide-saturated soil, 135 tons of cadmium-saturated soil, and various other hazardous materials from the Site. This action removed the direct contact and leaching to groundwater threats posed by source materials onsite.

Specifically identify the discrete activities and site areas to be considered by this panel evaluation:

The discrete activity to be considered is the injection of calcium polysulfide into the subsurface to remediate dissolved-phase metals contaminant concentrations in excess of cleanup goals for groundwater.

Briefly describe additional work remaining at the site for construction completion after completion of discrete activities being ranked:

No other activities needed at the Site after construction completion of discrete activities being ranked.

**SUPERFUND RESPONSE ACTION PRIORITY PANEL REVIEW FORM**

**Response Action Cost**

Total Cost of Proposed Response Action:

*(\$ amount should represent total funding need for new RA funding from national allowance above and beyond those funds anticipated to be utilized through special accounts or State Superfund Contracts.)*

\$1.54 million

Source of Proposed Response Action Cost Amount:

*(ROD, 30%, 60%, 90% RD, Contract Bid, USACE estimate, etc...)*

Pre-Final Remedial Design

Breakout of Total Action Cost Planned Annual Need by Fiscal Year:

*(If the estimated cost of the response action exceeds \$10 million, please provide multiple funding scenarios for fiscal year needs; general planned annual need scenario, maximum funding scenario, and minimum funding scenario.)*

\$1.54 million in FY2016

Other information or assumptions associated with cost estimates?

**Readiness Criteria**

1. Date State Superfund Contract or State Cooperative Agreement will be signed (Month)?

September 2015

2. If Non-Time Critical, is State cost sharing (provide details)?

Not applicable

3. If Remedial Action, when will Remedial Design be 95% complete?

The Pre-Final remedial design is now complete.

4. When will Region be able to obligate money to the site?

FY2016

5. Estimate when on-site construction activities will begin:

Within 3 months of obligation date

6. Has CERCLIS been updated to consistently reflect project cost/readiness information?

Yes



**SUPERFUND RESPONSE ACTION PRIORITY PANEL REVIEW FORM**

<b>Site/Project Name:</b>	<b>Alabama Plating Company, Inc.</b>		
<b>Criteria #1 - RISKS TO HUMAN POPULATION EXPOSED (Weight Factor = 5)</b>			
Describe the exposure scenario(s) driving the risk and remedy. Include risk and exposure information on current/future use, on-site/off-site, media, exposure route, and receptors:			
<p>Exposure scenarios evaluated were residents and on-Site workers. Groundwater concentrations within both the surficial aquifer and bedrock groundwater were found to either fall within (surficial aquifer) or exceed (bedrock) the EPA target risk range of <math>1 \times 10^{-6}</math> to <math>1 \times 10^{-4}</math> for both the residential and on-Site worker scenarios. Groundwater concentrations within both the surficial aquifer and bedrock groundwater were found to exceed noncancer benchmarks for both the residential and on-Site worker scenarios.</p> <p>The primary constituents contributing to noncancer risk were aluminum (surficial aquifer only), arsenic (bedrock only), cadmium, cobalt, iron (bedrock only), manganese, mercury (surficial aquifer only), thallium, and zinc.</p>			
Estimate the number of people reasonably anticipated to be exposed in the absence of any future EPA action for each medium for the following time frames:			
<b><u>MEDIUM</u></b>	<b><u>&lt;2yrs</u></b>	<b><u>&lt;10yrs</u></b>	<b><u>&gt;10yrs</u></b>
Groundwater	3000	3300	8000
Discuss the likelihood that the above exposures will occur:			
<p>The primary potential exposure that could occur is for the groundwater contaminant plume to migrate to the nearby drinking water intake for the City of Vincent municipal water system, which is solely spring-fed in this karst environment, and contaminate the City's drinking water. The secondary potential exposure that could take place is the consumptive use of contaminated Site groundwater for drinking water or irrigation purposes by nearby residents which raise livestock and grow residential gardens for personal food use.</p>			
Other Risk/Exposure Information?			
<b>Site/Project Name:</b>	<b>Alabama Plating Company, Inc.</b>		
<b>Criteria #2 – SITE/CONTAMINANT STABILITY (Weight Factor = 5)</b>			
Describe the means/likelihood that contamination could impact other areas/media given current containment:			
<p>The contamination, which is dissolved-phase metals in groundwater, is not currently contained. There is a potential for it to migrate towards the City of Vincent's spring-fed municipal water intake, which is located ¼ mile from the Site. The Site and the entire area is underlain by karst geology. In addition, there are plans to construct a marble quarry within a mile of the Site. It is unclear to what extent the intensive anticipated groundwater pumping at depth by the quarry operation could affect the groundwater plume migration.</p>			
Are the contaminants contained in engineered structure(s) that currently prevents migration of contaminants? Is this structure sound and likely to maintain its integrity?			
No			

**SUPERFUND RESPONSE ACTION PRIORITY PANEL REVIEW FORM**

Are the contaminants in a physical form that limits the potential to migrate from the site? Is this physical condition reversible or permanent?

No

Are there institutional physical controls that currently prevent exposure to contamination? How reliable is it estimated to be?

No

Other information on site/contaminant stability?

**Site/Project Name:** Alabama Plating Company, Inc.

**Criteria #3 – CONTAMINANT CHARACTERISTICS (Weight Factor = 3)**

*(Concentration, toxicity, and volume or area contaminated above health based levels)*

List Principle Contaminants (Please provide average and high concentrations.):

*(Provide upper end concentration (e.g. 95% upper confidence level for the mean, as is used in a risk assessment, or maximum value [assuming it is not a true outlier], along with a measure of how values are distributed {e.g. standard deviation} or a central tendency values [e.g., average].)*

<b><u>Contaminant</u></b>	<b><u>*Media</u></b>	<b><u>**Concentrations</u></b>
Aluminum	GW	4,970 (110 – 31,000) micrograms/liter
Arsenic	GW	2.5 (1.2 – 25)
Cadmium	GW	136 (0.54 – 420)
Cobalt	GW	200 (7.3 – 860)
Iron	GW	2,800 (100 – 18,000)
Lead	GW	33.8 (1.1 – 69)
Manganese	GW	6,970 (5 – 32,000)
Mercury	GW	7.3 (0.19 – 12)
Nickel	GW	231 (10 – 420)
Thallium	GW	3.2 (1.1 – 4.3)
Zinc	GW	79,400 (10 – 230,000)

*(\*Media: AR – Air, SL – Soil, ST – Sediment, GW – Groundwater, SW – Surface Water)*

*(\*\*Concentrations: Provide concentration measure used in the risk assessment and Record of Decision as the basis for the remedy.)*



**SUPERFUND RESPONSE ACTION PRIORITY PANEL REVIEW FORM**

Describe the characteristics of the contaminant with regards to its inherent toxicity and the significance of the concentrations and amount of the contaminant to site risk. *(Please include the clean up level of the contaminants discussed.)*

The primary toxicity concern here is the noncancer effects of oral and ingestion exposure to contaminated groundwater with metals greatly in excess of a hazard index of 1. The current HI exceeds 197 for a child resident and 57 for an on-site worker. Toxics effects primarily relate to target-organ specific exceedances for nervous system, skin, kidney, thyroid, and blood through ingestion of the groundwater. The cleanup levels are as follows:

Contaminant of Concern	Cleanup Goal (µg/L)
Aluminum	16000
Arsenic	10
Cadmium	5
Cobalt	6
Cyanide	200
Iron	14000
Lead	15
Manganese	880
Mercury	2
Nickel	100
Thallium	2
Zinc	6000

Describe any additional information on contaminant concentrations which could provide a better context for the distribution, amount, and/or extent of site contamination. *(e.g. frequency of detection/outlier concentrations, exposure point concentrations, maximum or average concentration values, etc.....)*

Cadmium is the contaminant detected with the greatest frequency and over the greatest horizontal extent. Cadmium above its cleanup goal in groundwater covers an estimated area of 14.6 acres and extends over 2000 feet off-site in the down gradient direction. The majority of site groundwater contamination is located within a 4-acre area, which is proposed for in-situ treatment, that encompasses the highest concentrations of cadmium (50 to 983 µg/L), cobalt (150 to 3,100 µg/L), and manganese (2,700 to 1,100,000 µg/L) along with the full horizontal extent of lead, nickel, thallium, and zinc above cleanup goals.

Pre-RD field investigation activities found an area of the site (adjacent to the former galvanizing building location) with much higher groundwater metals concentrations than found during the RI and used in the risk assessment. Maximum contaminant concentrations found in this area included aluminum at 100,000 µg/L, cadmium at 930 µg/L, cobalt at 3,100 µg/L, iron at 1,100,000 µg/L, lead at 520 µg/L, manganese at 1,100,000 µg/L, nickel at 2,400 µg/L, and zinc at 1,200,000 µg/L.

Other information on contaminant characteristics?

<b>Site/Project Name:</b>	<b>Alabama Plating Company, Inc.</b>
<b>Criteria #4 – THREAT TO SIGNIFICANT ENVIRONMENT (Weight Factor = 3)</b> <i>(Endangered species or their critical habitats, sensitive environmental areas.)</i>	
Describe any observed or predicted adverse impacts on ecological receptors including their ecological significance, the likelihood of impacts occurring, and the estimated size of impacted area:	
There were no observed or predicted adverse impacts on ecological receptors	
Would natural recovery occur if no action was taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, estimate how long this would take.	
Other information on threat to significant environment?	
<b>Site/Project Name:</b>	<b>Alabama Plating Company, Inc.</b>
<b>Criteria #5 – PROGRAMMATIC CONSIDERATIONS (Weight Factor = 4)</b> <i>(Innovative technologies, state/community acceptance, environmental justice, redevelopment, construction completion, economic redevelopment.)</i>	
Describe the degree to which the community accepts the response action.	
The community accepts the cleanup action as evidenced by the feedback from the Record of Decision summary of the Proposed Plan meeting.	
Describe the degree to which the State accepts the response action.	
The State concurred with the remedy and is willing to sign a State Superfund Cost share agreement to fund the State portion of the remedial action costs.	
Describe other programmatic considerations, e.g.; natural resource damage claim pending, Brownfields site, use of innovative technology, construction completion, economic redevelopment, environmental justice, etc...	
We can attain a construction completion in the same year as the remedial action funding is obligated. The Site owner (non-PRP) is planning to construct a commercial retail operation there, and has actively engaged dry goods retailers such as the Family Dollar and Dollar General. We have issued a bona-fide prospective purchaser (BFPP) letter to the construction location firm that represents the Dollar General. The location is on well-traveled Highway 231 that connects I-20 to Birmingham through Pell City.	